

DB12

①

95% C

	F	S
mean	9.7	8.25
SD	3.3	3.3
n	40	45

$$(\bar{X}_1 - \bar{X}_2) \pm Z \cdot \sqrt{\frac{\sigma^2}{n} + \frac{\sigma^2}{n}}$$

$$(9.7 - 8.25) \pm \left[1.96 \cdot \sqrt{\frac{3.3^2}{40} + \frac{3.3^2}{45}} \right]$$

$$1.45 \pm [1.96 \cdot .71711]$$

$$1.45 \pm 1.4055$$

$$* (.0445 \text{ to } 2.855) *$$

②

	J	S
variance	14.25	13.45
$\sigma^2 \rightarrow$	4.3	4.3
	60	55

"Difference"

$$Z = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{\sigma^2}{n} + \frac{\sigma^2}{n}}}$$

$$Z = \frac{14.25 - 13.45}{\sqrt{\frac{4.3}{60} + \frac{4.3}{55}}} = \frac{.8}{\sqrt{.14991}}$$

A $z = 2.0666 = \boxed{2.07}$

B $p = .0192 * 2 = \boxed{.0384}$

C Reject H_0 , Accept H_a

③

Total difference = 36
 st dev = $\boxed{4.05}$
 $\bar{x} = 36/12 = \boxed{3}$

$$t = \frac{3}{\left(\frac{4.05}{\sqrt{12}} \right)} = \boxed{2.566} \text{ ①}$$

$.02 < p < .05$ ②

Reject H_0 , Accept H_a ③